Emergency Alert Notification Just became simpler!

FAST℠

First Alert System Text

Federal, State and Local Emergency Operations Centers all working as one

What is FAST?

- The **First Alert System Text** or **FAST** system is a national emergency alert system that uses cell phone based text messages to communicate important information throughout the United States.

Why Use Cell Phones?

- Cell phone use in the U.S. has risen from 34 million in 1996 to more than 250 million today. (World-wide, there are an estimated two billion cell phones in use).
- There are more than 210,000 cell sites in the U.S.
- Wireless is available to over 70 percent of the total U.S. Population.
- Anywhere, anytime communication is now demanded by all generations of mobile users who no longer want to be chained to their PCs.

Why Use Cell Phones for Notification Purposes?

- More people now have cell phones than fixed telephone lines in the U.S.
- Cell phones are the last form of communication to fail during major catastrophes.
- Cell phones are the first form of communication to resume during recovery from catastrophes.
- More than 60 million teenagers now carry cell phones, and most take them everywhere they go.

Text Messaging via Cell Phones

- Text Messaging via cell phones also known as **SMS** or **Short Message Service**, is quick, easy and effective.
- Text messaging is now the most popular non-voice feature with 61 million users having tried it at least once.
- Text messaging combines the portability of cell phones with the convenience of e-mail and instant messaging.

What is SMS text messaging?

- A text message sent via SMS (**Short Message Service**) is a single short message displayed as text on the screen of the recipient's mobile telephone.
- SMS messages travel above the phone's radio channel on the signaling path.
- An SMS text message can be up to 240 characters in length.

SMS Technology

- SMS messages are transmitted anywhere to anyone with roaming capability.
- SMS can be sent to digital phones from a web site equipped with a PC Link.
- SMS messages not immediately received are retained until the phone is active or is within range and then delivered.

SMS Technology

- SMS can be sent from one digital phone to another.
- SMS can confirm that the message was delivered.
- Because short messages travel over and above the radio channel using the signaling path, users of SMS rarely, if ever, get a busy or engaged signal.

SMS Technology

- Multiple outgoing text messages can be sent simultaneously.
- Text messages can be received even while the phone is in use.

How fast is text messaging compared to voice messaging?

- A voice message typically takes 3-5 minutes to dial the number and deliver the recording.
- An SMS text message is usually delivered in about 20 milliseconds. It is an extremely fast and efficient way to send out many messages in a short amount of time.

SMTP vs SMPP

- Both SMTP and SMPP are protocols for sending SMS messages.
- SMTP stands for "**Simple Mail Transfer Protocol**" and was first published in August of 1982 as the primary means to send email messages (and is still used today).
- SMPP stands for "**Short Message Peer-to-Peer Protocol**" and is the telecommunication industry's favored protocol for exchanging SMS messages.

How Does SMTP Work?

- A message sent via **Simple Mail Transfer Protocol** (SMTP) is routed through the carrier's e-mail network

Signaling Path

Radio Frequency Channel: Standard Voice traffic

Yield

To traffic

SMTP

Cell Phone Provider's E-Mail Router

How Does SMPP Work?

- Sending a text message via the SMPP protocol is the true way to send a text message. When you send a text message from your cell to your friend's cell (peer to peer), it is being routed through the carrier's SMS Messaging Center and sent via the carrier's signal path.

SMPP

Cell Phone Provider's SMS Messaging Center

Signaling Path

Radio Frequency Channel: Standard Voice traffic

Yield

To traffic

SMTP

Cell Phone Provider's E-Mail Router

FAST First Alert System Text SM

Issues With SMTP

Delivery

- SMTP is not a direct connection to carriers and as a result, messages are much more likely to not reach their destination. Some messages may take 24-48 hours or not show up at all.
- Voice traffic takes precedence over SMTP traffic and may prevent any and all SMTP messages from being delivered during times of high usage
- **Whereas SMPP has priority routing and is delivered at a faster rate.**

Change of E-mail Domain

- Because SMTP utilizes an e-mail address (10digitnumber@mobilephonecompany.com) any address changes will prevent all messages from going through.
- **Whereas messages sent via SMPP reference only the phone number and will therefore always be delivered as long as the phone number remains active.**

Reporting Capabilities

- SMTP doesn’t have any capabilities to report or log transmission activities.
- **Whereas SMPP provides information regarding successful and failed deliveries, and why a text message failed. It can also offer a return receipt.**

Interactive Communication

- SMTP is strictly one way communication
- **Whereas SMPP offers full two-way text messaging capabilities so you can create a dialogue and obtain important feedback.**

Short Codes

- SMTP offers no short code for interactive communication. The only thing you can do is send a one-way message out.
- **Whereas SMPP offers short codes enabling interaction between parties.**

Subscribe & Unsubscribe

- SMTP does not provide the opportunity to subscribe or unsubscribe.
- **Whereas SMPP allows users to text a keyword to a short code (i.e. FAST to 47733) to subscribe to or modify existing services. Unsubscribing is just as simple using a designated short code.**

What Makes First Alert Text Different?

FAST is the first text based emergency alert system to develop agreements with all major cell phone carriers and aggregators to utilize the SMPP Protocol.

Why Did Cell Phone Companies partner with FAST?

- Cell phone companies recognize the deficiencies and unreliability in the SMTP protocol and hope to steer organizations away from using this method to deliver emergency messages.
- The shared responsibility payment model developed and proposed by FAST now allows cell phone companies to collect revenue for granting users access to the SMPP Short Message Service.

Advantages of the First Alert Text System

Dependability and Reliability

- Cell phones operate without regard to power outages or other utility interruptions.
- However, in order to receive a message via fax, e-mail or voice mail you…
  - Must have electric power;
  - Must have an internet connection;
  - Must be logged on; or,
  - Must be next to the phone, fax or computer.

Clarity

- The recipient knows immediately what the emergency involves.

Persistence

- Messages are saved until the cell phone is turned on or comes in range of a cell tower at which time it will be delivered.

Retention

- Text messages are stored on the recipient's cell phone to be retrieved and reviewed again later if necessary.

Mobility

- Messages are delivered to cell phones anywhere in the U.S. as long as the recipient is within range of a cell tower.

Tiered Access

- The tiered national access system allows vertical notification within all tiers of responsibility. Counties can provide notification in their Cities. States can provide notifications to their Counties and Cities, and the Federal level can provide notifications to all States, Counties or Cities (and visa versa).

Flexibility

- FAST allows schools, churches, fraternal organizations, businesses and almost any other type of entity to be licensed and granted the ability to send notifications to their specified subscribers.

Access to All Regional Alerts

- FAST subscribers may opt to receive alerts originating from any location within the U.S.
- This is especially useful for:
  - Travelers and visitors to new or unfamiliar regions.
  - Those with family, property or interests in other cities or regions

How Does FAST Work?

For Alert Administrators

- FAST offers an SMS gateway via the internet
- FAST enables Alert Administrators to send an SMS message via SMPP to users or groups served by that gateway and/or acts as an international gateway for users with roaming capability.

State Emergency Management

Alert Administrator

Designated Subscribers

Interested Subscribers

Sub-Groups

Sub-Groups

Sub-Groups

FAST First Alert System Text SM

How Does an Entity Become an Alert Administrator/Provider?

- Internet based activation
- Now Free to all Cities, States and Schools
- Designate groups, sub-groups, geographic areas, etc.
- Enter all subscriber phone numbers
- Begin issuing alerts via the internet

Issuing Alerts

Who Can Receive Your Notifications?

- Select group(s) that you designate by phone number.
- Members of the general public who request your alerts using your name.
- Members of the general public that request notification from the zip code(s) you serve.
- Federal, state, and/or local agencies associated with your area.

Receiving Alerts

National Alerts

- Subscribers can request national alerts by selecting various options via personal internet account.
  - NOAA
  - Federal, State & local Agencies

Regional Alerts

- Subscribers can request region specific alerts by entering a zip code from another area
  - NOAA
  - Federal, State & local Agencies

Local Alerts

- Requested by entering the local zip code(s)
- Requested by using administering entity's name
- Requested by using local school's name
- Received based on affiliation with an alert notifier who enters subscriber's phone number into a notification group

Subscribing to Alerts

Subscribing via Cell Phone

- Key the word “FAST (zipcode) or (entity name)” into a personal cell phone using the short code 47733.
- A message is sent letting subscriber know there is a charge for joining the National Emergency Alert Service. The cost is .99 cents per month. To accept they press “Y” for Yes.
- To opt out at anytime, send the word “stop” to the short code 47733 at which time all alerts and charges will cease.

Subscribing via the Internet?

- Subscriber goes to “SignUp for Alerts” at www.firstalerttext.com
- Enters personal information, cell phone provider, cell phone number, etc. Creates a user name and password for future management of their account.
- Subscribers may also select which regions, organizations, schools, zipcodes, etc, they want to receive alerts from.

Adoption Goals

- **First Alert System Text will target the following:**

- Social Networking Sites
  - Facebook 23 Million people
  - Kaboodle ½ Million people US
  - Friendster 50 Million people US
  - Classmates 50 Million US

- Government Agencies
  - Employees, First Responders Law Enforcement
  - Public Service Announcements Spots

Summary

- In today's world, timely emergency notification is absolutely necessary to prevent death, injury, and destruction. The FAST system serves as a crucial, effective, scalable and inexpensive, notification tool and is available to any government entity in the United States for free, responsible for public or private safety.
- We expect with multiple uses and dependencies of this database the total numbers will grow quickly become the largest and most used database here in the US

Emergency Alert Notification Just became simpler!

FAST℠

First Alert System Text

Federal, State and Local Emergency Operations Centers all working as one